STAFF REPORT

ORDER NO. R5-2007-____
PACIFIC US REAL ESTATE GROUP
SILVERTIP RESORT VILLAGE WASTEWATER TREATMENT FACILITY
MARIPOSA COUNTY

Background

The PacificUS Real Estate Group (Discharger) proposes to construct and operate a wastewater treatment facility (WWTF) at the proposed SilverTip Resort (Resort) in Fish Camp, Mariposa County. The WWTF will be designed and constructed to process all of the wastewater generated from the Resort. The Resort will reportedly include a hotel, a large conference center, four smaller conference centers, 30 cabins, housing for employees, a tennis court, a pool, and associated roadways and parking areas, all to be constructed within a 47-acre area.

A portion of site (about 9 acres) previously contained a resort known as the SilverTip Resort. The original SilverTip hotel, which included a restaurant as well, burned down twice, once in about 1961 and next in 1981. All that remains following the 1981 fire is a concrete slab and the now vacant restaurant. The Regional Water Board issued a Clean Up and Abatement order in August 1980 to the then property owner Mr. Robert Keller in response to the surfacing of sewage in the adjacent meadow due to septic tank overflow. BSK and Associates evaluated the existing septic system and prepared a report in January 1981 indicating the septic system was undersized for the load it was sustaining and provided plans for enlarging the system. The work was not completed due to the fire that destroyed the hotel.

Proposed Discharge

The Discharger submitted a report of waste discharge (RWD) dated 25 August 2004 for a new tertiary WWTF to serve the proposed Resort. The WWTF will be designed to have a monthly average daily flow of 33,500 million gallons per day (mgd) and a peak daily flow of 74,000 mgd. The proposed WWTF will consist of a septic tank wastewater collection system and a tertiary wastewater treatment system. The treatment process will include flow equalization, trickling filters with interstage clarification, denitrification, microfiltration, and ultraviolet light disinfection. The effluent quality will comply with California Code of Regulations, Title 22 standards for “disinfected tertiary recycled water.”

The Discharger characterized the anticipated influent and effluent with and without recycling of effluent for toilet flushing as follows:

Anticipated Influent and Effluent Concentrations

Constituent	Supply Water[1]	Influent Concentration	Influent Concentration (with Toilet Return)	Effluent Concentration
Biochemical Oxygen Demand	0	450	---	10

Anticipated Influent and Effluent Concentrations (continued)

Constituent	Supply Water[1]	Influent Concentration	Influent Concentration (with Toilet Return)	Effluent Concentration
Suspended Solids	0	600	---	10
Total Dissolved Solids	110	385	503	385/503
Specific Conductivity	160 umhos/cm	370 umhos/cm	---	500 umhos/cm + source water
Calcium	20	35	---	---
Magnesium	4	14	---	---
Sodium	8	78	108	78/108
Chloride	1	76	108	76/108
Hardness	65	135	---	---
Total Nitrogen	0	60	---	10
Total Phosphorus	0	17	---	12
Potassium	2	12	---	---

1. All units are in milligrams per liter (mg/L) unless noted otherwise.

Treatment Technology and Control

The Discharger provides treatment and control of the discharge that incorporates:

a. Alarm and automatic flow diversion systems to prevent system bypass or overflow;

b. A nitrogen removal treatment process;

c. Microfiltration of treated effluent;

d. UV Disinfection of treated effluent;

e. Recycled water application at plant uptake (for nitrogen and water) rates;

f. Appropriate biosolids storage and disposal practices;

g. An Operation and Maintenance (O&M) manual;

h. Certified operators (minimum Grade III) to insure proper operation and maintenance.

Groundwater Conditions

Regional groundwater is contained in fractured bedrock and to a lesser extent in alluvial/weathered bedrock deposits. Seven wells on the subject property tap the fractured bedrock aquifer. Five of these wells (STR-1 through STR-5) tap deeper fractures. Well STR 5 will be the water supply for the proposed Resort. Two wells (YACSD 1 and YACSD 2) tap shallower fractures and provide water to the Yosemite Alpine Community Service District (YACSD). The YACSD wells were designed to supply water to up to 46 users in the Yosemite Alpine Village Subdivision. Groundwater quality from the STR and YACSD wells is excellent (high quality). Analytical data for the SilverTip wells is presented below.

Bedrock Wells Analytical Data

(Units in milligram per liter unless noted otherwise)

Constituents	STR 2	STR 3	STR 4	STR 5
Calcium	24	21	18	20
Magnesium	5	5	4	3
Sodium	9	8	9	8
Bicarbonate	122	116	95	88
Sulfate	2	2	3	2
Chloride	1	1	<1	3
Nitrate	<0.4	<0.4	<0.4	3.5
pH (standard pH units)	7.3	7.2	7.0	7.3
Electrical Conductivity (micromhos per centimeter)	193	188	157	161
Total Dissolved Solids	138	113	111	123
Alpha Activity (pico curies per liter)	10	9	10	6

Surface Water Conditions

Big Creek, a tributary of the South Fork of the Merced River is located along the eastern boundary of the proposed Resort property. Surface water quality in Big Creek is excellent (high quality). Samples collected In November 1999 provide the following results.

Big Creek Analytical Data

Constituent	Units	Analytical Results
Calcium	Milligrams per liter (mg/L)	17
Magnesium	mg/L	2.2
Sodium	mg/L	3.1
Potassium	mg/L	1.1
Hydroxide	mg/L	Not detected (ND)
Carbonate	mg/L	ND
Bicarbonate	mg/L	70
Sulfate	mg/L	ND
Chloride	mg/L	1.7
Nitrate	mg/L	ND
Ammonia as Nitrogen	mg/L	0.02
Organic Nitrogen	mg/L	ND
pH	Standard pH Units	7.59
Specific Conductivity (EC)	micromhos per centimeter	119
Total Dissolved Solids (TDS)	mg/L	87

CEQA and Waste Discharge Requirements
Mariposa County, as CEQA Lead Agency, circulated a Draft Environmental Impact Report (EIR) regarding the proposed Resort in July 2001 for public review and comment. Following the receipt of comments from various agencies and interested parties, the County circulated a Revised Draft EIR in September 2002. The County considered potential environmental impacts, including impacts to groundwater and surface water, in the Draft EIR and Revised Draft EIR. Regional Water Board Staff reviewed and commented on the Draft and Revised Draft EIRs. As a comment to the Draft EIR, Regional Water Board staff requested the Discharger prepare an Antidegradation Analysis to satisfy the provisions of State Water Board Resolution 68-16 and the federal antidegradation policy as prescribed by 40 CFR 131.12. The Discharger submitted an *Antidegradation Analysis for Silvertip Resort Village Wastewater* prepared in October 1999 and a *Final Antidegradation Analysis* was presented in September 2001. To address further comments to the Draft EIR, the Discharger submitted a *Hydrogeologic Conditions and Wastewater Management Plan* in March 2002.

In December 2003, Mariposa County certified a Final EIR. Mariposa County found that any environmental impacts that would occur are justified by the benefits of the project, and

therefore, in the best interest of the people of the State. Regional Water Board staff reviewed the Final EIR and the mitigation measures it included. The Regional Water Board, as a public agency responsible for protecting surface water and groundwater, must consider the environmental effects to water quality identified in the EIR and adopt measures to mitigate those effects. The Final EIR adequately describes the potential degradation of surface water and groundwater and includes adequate mitigation measures, which are incorporated into this Order, to protect the beneficial uses of those waters.

Comments/Issues
Comment letters were received from the California Department of Public Health, the Discharger, and the Yosemite Alpine Community Service District. Most of the Department of Public Health comments were editorial in nature. One comment addressed concerns about the locations of the sprayfields and leachfields about the proximity of domestic wells and potential impact from the discharged wastewater. Previous information indicated the wells will meet applicable Title 22 setback requirements with respect distance from the leachfield and the distance irrigated recycled water can be from wells. A pumping test conducted in 1999 demonstrated the deeper fracture zones are not in communication with the upper alluvial aquifer. Additionally, the wastewater will be tertiary treated, microfiltered, and disinfected with UV light prior to discharge to either the spray fields or the leachfield.

The Discharger's comments were mostly editorial in nature. They did request the removal of surface water from the Monitoring and Reporting Program (MRP) feeling it was redundant. However, surface water monitoring was included as mitigation measure monitoring in the EIR and so will not be removed from the MRP.

The letter from the Yosemite Alpine Community Services District contained numerous requests to deny the TWDR from being issued, most of which were issues addressed in the EIR and subsequent documents. A key concern for the Yosemite Alpine Community Services District is potential impact to the two wells, YACSD 1 and YACSD 2, which provide water to the Yosemite Alpine Village. Both are located in the meadow area that will be developed. The County addressed potential impact to the wells in the EIR (tertiary treatment of wastewater, microfiltration of effluent, UV disinfection, greater than 150 feet from the leachfield, and the production zone for wells is not in direct communication with upper alluvial aquifer) and demonstrated that the impact to the wells should be minimal.

The Yosemite Alpine Community Services District also requests the TWDR be denied and requests the Discharger apply for a permit for an NPDES permit for direct discharge to Big Creek, which is present along the eastern property boundary. The Discharger addressed the issue in the EIR and subsequent reports and found it not to be a suitable alternative due to periods of low flow when the treated effluent could not be discharged into the creek.

The Yosemite Alpine Village Homeowners association expressed concerns similar to those of the Community Service District.

Prior to any construction activities, the Discharger shall submit a Title 22 Engineering Report as indicated in Provision H.11.a. of the TWDR. The Title 22 Engineering Report shall contain (or submitted separately) a Use Area Management Plan that will discuss in detail the Wastewater Recycling Program for the proposed resort. Additionally, the Discharger is to submit groundwater and surface water monitoring plans as indicated in Provisions H.11.a., and b., respectively. The TWDRs contain discharge prohibitions, effluent and recycling water limitations, and groundwater limitations that were developed to protect the beneficial uses of receiving water and prevent conditions of nuisance.

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